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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/327,523	06/08/1999	TAKAHISA UENO	P99.0401	5532

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EXAMINER

MOE, AUNG SOE

ART UNIT

PAPER NUMBER

2612

DATE MAILED: 06/30/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/327,523

Applicant(s)

UENO ET AL.

Examiner

Aung S. Moe

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3,5-8 and 12-21 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-3,5-8,15-17,20 and 21 is/are allowed.
- 6) ☒ Claim(s) 12-14,18 and 19 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed on 2/25/2005 have been fully considered but they are not persuasive.

Regarding to the combination of Gowda '168 and Chi '243, the Applicant alleged that there is no teaching or suggestion to combine the two cited references.

In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992).

In this case, Gowda '168 discloses a method for driving a solid-state imaging element (Figs. 2 and 3A) which includes unit pixels, arranged in a matrix (18/30), each of which have photoelectric conversion element (6/26/110), a transfer switch (8/22) and reset switch (11/21) for resetting said charge store part (i.e., 7/25), and selecting pixels in units of rows by controlling a reset potential applied to selected one of said reset switches (i.e., see Figs. 5-6 and 11; col. 4, lines 25+ and col. 5, lines 20+). On the other hand, Chi '243 clearly suggested the use of a negative voltage to a gate of the reset switch (i.e., col. 3, lines 35-45) in order to provide the solid-state imaging device with a wide dynamic range that is adjustable thereof. In view of this, the Examiner asserts that possessing knowledge generally available to the skilled artisan at the

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time of the invention was made, it would have motivated to modify the system of Gowda '168 as taught by Chi '243, since Chi '243 states at column 4, lines 40+ that such a modification would provide the solid-state imaging device with a wide dynamic range that is adjustable thereof.

Therefore, claims 12-14, 18 and 19 are obvious over Gowda '168 in view of Chi '243 for at least the reasons discussed above, the Examiner will maintain the rejections as follows:

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 12-14, 18 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gowda et al. (U.S. 5,898,168) in view of Chi et al. (U.S. 5,608,243).

Regarding claim 12, Gowda '168 discloses a method for driving a solid-state imaging element (Figs. 2 and 3A) which includes unit pixels, arranged in a matrix (18/30), each of which have photoelectric conversion element (6/26/110), a transfer switch (8/22) for transferring charge stored in said photoelectric conversion element (6/26/110), charge stored part for storing charge (i.e., Figs. 1 and 3B; the elements 7 and 25; col. 1, lines 65+ and col. 5, lines 50+) transferred by said transfer switch (8/22), reset switch (11/21) for resetting said charge store part (i.e., 7/25),

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and an amplifying element (i.e., 13/23) for outputting a signal in accordance with a potential of said charge store part (i.e., 15/15j), said method comprising the step of:

selecting pixels in units of rows by controlling a reset potential applied to selected one of said reset switches (i.e., see Figs. 5-6 and 11; col. 4, lines 25+ and col. 5, lines 20+).

Furthermore, it is noted that Gowda '168 does not explicitly state wherein a negative voltage is applied to a gate of said reset switch as recited in claim 12.

However, the above-mentioned claimed limitations are well known in the art as evidenced by Chi '243. In particular, Chi '243 teaches that it is conventionally well known in the art at the time of the invention was made to apply a negative voltage to a gate of the reset switch (i.e., col. 3, lines 35-45).

In view of the above, having the system of Gowda '168 and then given the well-established teaching of Chi '243, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the system of Gowda '168 as taught by Chi '243, since Chi '243 states at column 4, lines 40+ that such a modification would provide the solid-state imaging device with a wide dynamic range that is adjustable thereof.

Regarding claim 13, Gowda '168 discloses the step of: outputting signals read into said vertical signal lines in voltage mode (i.e., col. 8, lines 21+).

Regarding claim 14, Gowda '168 discloses the step of: outputting signals read into said vertical signal lines in current mode (i.e., col. 7, lines 39+).

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Regarding claim 18, Gowda '168 discloses the solid-state camera system and method comprising reading of a reference level with a falling edge of the reset pulse (as shown in Figs. 5, 6 and 11; col. 5, lines 15+ and col. 6, lines 5+).

Regarding claim 19, Gowda '168 discloses wherein a changing state of reset pulse and a selection pulse initiates a pixel reading operation (i.e., col. 4, lines 20+, col. 5, lines 14+ and col. 6, lines 5+; see Figs. 5-6 and 11).

Allowable Subject Matter

3. Claims 1-3, 5-8, 15-17 and 20-21 are allowable in view of the Applicant's remarks filed on Sep. 17, 2004.

Conclusion

4. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37


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CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Aung S. Moe whose telephone number is 571-272-7314. The examiner can normally be reached on Mon-Fri (9-5).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wendy Garber can be reached on 571-272-7308. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Aung S. Moe
Primary Examiner
Art Unit 2612

A. Moe
June 26, 2005